

REMARKS

The claims have been amended so as to recite with more precision the order in which the various layers are applied.

Reconsideration is accordingly respectfully requested, for the rejection of the claims as unpatentable over EP 0 897 174 in view of EP 0 911 803 and NEWSAM and optionally further taking with any of HOM, WHITEMORE et al. or BEGGS et al., or as unpatentable over ADEE et al. in view of DAUNT et al. and 0 911 803 optionally further taking with any of the three of the references.

In a nutshell:

Prior art relied on in the Official Action fails to anticipate or teach or make obvious the sequence of applying the layers in our process, starting with applying the layer with structural properties (the outer layer) on a mold.

In greater detail:

In EP 0 911 803, construction of a panel is described in column 3, lines 7-38.

Such construction starts with bonding a honeycomb structure to a solid back face sheet 12.

Then a mesh structure 18 is bonded onto the opposite side of the honeycomb core structure and the mesh structure 18 is in turn covered by a perforated sheet 16 bonded to the mesh structure.

'803 states that bonding of the mesh structure 18 to the honeycomb core structure is preferably accomplished through application of a low flow reticulating adhesive.

The process of '803 contradicts the present invention process of claim 9 where the construction:

- starts with the application of a first layer with structural properties constituted by filaments pre-impregnated on a mold;
- comprises then emplacing on the said first layer a second layer with acoustical properties constituted by a microporous cloth;
- comprises thereafter emplacing the cellular structure e.g. honeycomb structure, and
- at the end the reflector.

NEWSAM column 2 and Figure 1 describes a cellular core 11 between a solid sound reflecting aluminum sheet 12 on one side and by a porous sheet 13 on the other side.

The porous sheet 13 is made up of two porous fabrics 14 and 15.

The first fabric 14 is closely woven polyester filaments so that fabric 14 functions as an acoustic damper made of polyester or steel filaments.

The manufacturing process for the panel of NEWSAM starts with:

- laying up a sheet of open weave fabric and a sheet of porous acoustical damping fabric;
- molding said sheets;
- applying a film of an adhesive to the open weave fabric;
- heating said film;
- applying the bonded sheet to one side of a cellular core and;
- bonding a solid sound reflecting sheet on the other side of the cellular core.

In NEWSAM, the two fabrics are bonded together in a first step and then bonded to the resonator.

The cellular core and the sound reflecting sheet are not joined with the fabrics sheet during the molding process.

Should the skilled artisan wish to add a protective layer to '803 as taught by NEWSAM, such layer would be added at the end of the process of '803, that means above the perforated sheet 16, since nowhere in '803 nor in NEWSAM is it taught to start construction of the panel on a mold with a protective layer as first layer.

No teaching in NEWSAM gives the skilled artisan the idea to reverse the construction process of '803 for the panel and to build all the layers on a mold.

The process of the present invention is therefore not suggested by the combination of '803 and NEWSAM.

In point 3 of the Official Action, page 2, last paragraph to page 3, line 10 discusses the possibility to employ a structural layer on the exterior of the composite layer. The question of such a possibility being obvious or not is irrelevant since the present invention relates to a process with a well-defined order of building layers which is neither addressed in '803 nor in NEWSAM.

Page 6, paragraph 2 of the Official Action states that NEWSAM was introduced to show the use of plastic or metallic fibers would be alternative.

This question is not relevant with respect to claim 9 which concerns a process done with steps in a certain order which is not suggested by the cited references.

The question of curing the layers in an autoclave as discussed in the Official Action page 3, second paragraph to page 4, first paragraph is secondary since none of the cited documents disclose a process where a panel is manufactured using the steps of emplacing on a mold a structural layer, then an attenuation layer on the structural layer, then a core structure on the attenuation layer and a reflector at the end, at least one step of baking being performed at the end of at least one of the said steps of emplacing the layers.

HOM, WHITEMORE and BEGGS et al. describe baking panels in an autoclave.

However:

- with respect to claim 9, such baking is not done while layers of a panel are on a mold, and,

- with respect to claim 11, there is no teaching in these documents that successive steps of baking are done while the layers are on a mold, a further baking of the complete panel being done with the complete panel still on the mold.

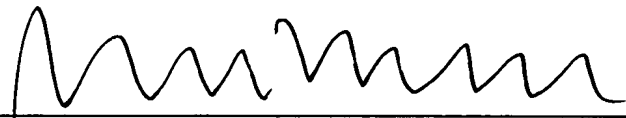
The references to ADEE et al. and DAUNT et al. and EP 0 897 174 are similarly non-pertinent for the above reasons and do nothing to improve the rejections on the references discussed in greater detail above.

In view of the present amendment and the foregoing remarks, therefore, it is believed that this application has been placed in condition for allowance, and reconsideration and allowance are respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

YOUNG & THOMPSON



Robert J. Patch, Reg. No. 17,355  
745 South 23<sup>rd</sup> Street  
Arlington, VA 22202  
Telephone (703) 521-2297  
Telefax (703) 685-0573  
(703) 979-4709

RJP/lk